Little Dudlands Farm, Rimmington Lane, Clitheroe, BB7 4EA

Bats: Building Inspection and Night Time Surveys

Simply Ecology Limited

Written by: Kevin Heywood BSc (Hons)

Checked by: Jason Reynolds MSc MCIEEM

November 2016

For

Sunderland Peacock and Associates Ltd.,
Hazelmere,
Pimlico Road,
Clitheroe,
Lancashire,
BB7 2AG

Simply Ecology Ltd, Office 7-2-6, Cameron House, White Cross, South Road, Lancaster LA1 4XF

Tel: 01524 874522 - Mob: 07754 538437 - info@simplyecology.co.uk

www.simplyecology.co.uk

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1.0 INTRODUCTION

1.1 Background Information

1.1.1 In 2013 a Bat and Bird Survey was undertaken at Little Dudlands Farm, Rimmington Lane, Clitheroe, BB7 4EA (O/S Grid SD 808 465; hereafter referred to as the site). See Plan 1: Site Location and Plan 2: Existing Buildings.

1.1.2 The initial surveys and report were undertaken by Ribble Ecology, and found evidence of single common pipistrelle bat roost and a single Myotis spp. bat roost at the site. Since that date planning permission was subsequently granted by the Local Planning Authority (Ribble Valley Borough Council) (Permission 3/2016/0206). The LPA then conditioned the permission to ensure that bat mitigation was adequately addressed. This covers the necessity to make provisions for existing bat and bird species within the development.

1.1.3 As the initial 2013 survey data is too old for the issuance of a Natural England bat licence, Simply Ecology Limited was commissioned by Sunderland Peacock and Associates Ltd in July 2016 to undertake a renewed bat and bird assessment of the site to facilitate the discharging of planning conditions number 9 and 10 of the LPA planning permission document and the subsequent submission of a licence application to Natural England.

1.2 Aims

1.2.1 The aims of these surveys were to gather up-to-date information on the presence of bats at the site. This involved:

- Identifying potential structures of the building that could be used by bats.
- Identifying if there was any evidence of bats around the building.
- Providing an assessment of the likely importance of the site for bats and their conservation.
- Advising the client in relation to the proposed development and any impacts upon bats in order to ensure legislative compliance.

1.2.2 To achieve this, a building inspection for bats at the site was undertaken on 8th August 2016. This submission presents the results of the ecological surveys at the site.

1.3 Site Description and Proposed Works

1.3.1 The site is composed of an assemblage of buildings including two large old barns and nearby sheds/warehouses. The main barns were traditional stone buildings with pitched slate rooves. The small nearby sheds were made small wooden and breeze block buildings with asbestos pitched rooves.

1.3.2 The location of the site is situated between Rimmington and A59. The immediate surrounding countryside is comprised of open pasture fields punctuated by hedgerows and tree lines, as well as other associated farm buildings. The small Swanside Beck is located south of the site at the other end of some pasture fields.

1.3.3 The surveys described in this report were commissioned to inform an application by Sunderland Peacock and Associates Ltd. The proposed work consists of the conversion of the two main stone barns and associated loss or adjustment to the nearby sheds. The planning process requires up-to-date survey data in order to assess the ecological value of the site and the presence of any notable habitats or protected wildlife.

Plate 1: The eastern aspect of the barns.

2.0 SURVEY METHODOLOGY

2.1 External and Internal Building Survey

2.1.1 An inspection of all buildings on the site was specifically carried out to search for bats. The building survey was undertaken in accordance with the standard methods described in the 'Bat Worker's Manual' (JNCC 1999) and 'Bat Surveys – Good Practice Guidelines' (BCT 2016). In accordance with best practice, the survey comprised the following elements:

- An inspection of the exterior of the building to look for obvious signs of bat activity (such as droppings) and assessing the potential for entry/exit into the property.
- An internal inspection of all spaces to determine whether bats were present, to look for signs of activity (such as discarded prey items and droppings) and to assess potential suitability for bat species. Lighting was provided by a million candle power Cluson Clulite CB2.

2.1.2 Given that the previous survey found bats to be using the buildings, night time surveys were required whether signs of bats were found or not. However, evidence found during internal bat surveys can provide excellent context and supporting information which facilitate accurate conclusions with regards to the site's importance for protected bat species.

2.2 Night Time Activity Surveys

2.2.1 Surveys were undertaken in accordance with the standard methods described in the 'Bat Worker's Manual' (JNCC 2004) and 'Bat Surveys – Good Practice Guidelines' (Bat Conservation Trust 2016). The dusk emergence surveys were undertaken by Jason Reynolds, Kevin Heywood, Tobias Palmer and Richard Lowe. In accordance with best practice, the survey comprised the following elements:

- Emergence Surveys: Two night-time visits were undertaken to determine if bats were emerging from the building and to assess levels of bat activity. Activity during the time around and post sunset was observed visually and using Wildlife Acoustics EM Touch with iPads for recording. This equipment not only records the bats but also uses automatic ID software to identify those bats detected.
- Entry Survey: An additional dawn survey was carried out in order that bats returning to roosts could be observed. This type of survey is excellent at determining specific locations that bats utilise on a given structure. This facilitates the ability to provide an accurate depiction of the locations of roosts, and a clear idea of the numbers of bats using each roost.
- During all surveys the observers stood at allocated locations, which were judged to provide the best coverage of the building. From these locations, the observers would be expected to hear and also see any bats emerging from the buildings where roosts were anticipated or likely. Importantly, surveyors actively move to 'follow' the bats when they are eliciting characteristic behaviour that indicates they may be utilising a given feature. This undoubtedly increases accuracy and efficiency when recording the key features of importance for bats.
- Recordings were critically analysed live with the aid of automatic ID but most importantly through the knowledge and judgement of the surveyor. Anything of interest or calls that were not fully identified in the field were subsequently scrutinised after the survey. Analyses of recordings involved measurement of various parameters to determine the species of bat (call frequency, shape of call, call duration, maximum energy and inter pulse interval). These parameters were compared against reference calls and tabulated reference data (Russ, 2012) with the aid of tailored in house Simply Ecology software to enable successful species identification.

2.3 Personnel

2.3.1 All surveys were carried out by Jason Reynolds, Kevin Heywood, Tobias Palmer and Richard Lowe. Jason Reynolds MSc MCIEEM. Jason started Simply Ecology Limited in 2007. He is an experienced botanist with a broad range of ecological and conservation knowledge gained over 20 years working as a Conservation Officer for both statutory and charitable conservation bodies. These include English Nature, The Joint Nature Conservation Committee, Cumbria Wildlife Trust and the Environment Agency. Jason holds protected species survey licences for bats, white-clawed crayfish and great crested newts.

2.3.2 Kevin Heywood BSc (Hons) is an ecologist working for Simply Ecology Ltd. Kevin initiated his professional career in Ecology by achieving a first class honours degree from Lancaster University. Following on from this he has also acquired over 4 years of experience working as an ecologist in a freelance capacity and more recently as a full time employee for Simply Ecology Ltd. During this time he has developed numerous field skills and carried out a wide range of surveys. His expertise predominantly lies with habitat mapping and undertaking protected species surveys including: bats, great crested newts, badgers, otters and reptiles. Kevin holds a protected species licence for bats.

2.3.3 Tobias J Palmer MSc ACIEEM, is an ecologist working for Simply Ecology Ltd. Tobias has gained over 6+ years of experience in the field of ecology. He has worked for the

Environment Agency as well as ecological consultants undertaking protected species surveys since 2010. Tobias studied his master's degree at Lancaster University investigating the effects of predatory regime influence on the invasion success of the freshwater killer shrimp *Dikerogammarus villosus*.

2.3.4 Richard Lowe BSc (Hons) PGCE. Richard studied Environmental Management at The University of Central Lancashire and graduated in 1996. He has worked as an ecologist since that time in a variety of consultant roles, including as a Senior Ecologist at ERAP and latterly as a freelance contractor. Richard holds a great crested newt science and education licence. He has a broad range of experience of ecological survey and reporting knowledge, covering habitat mapping, protected species surveys and Environmental Impact Assessments. Richard is also an enthusiastic environmental educator, and regularly takes out school groups in Lancashire for the RSPB in his role as a Field Teacher.

2.4 Timing and Constraints

2.4.1 The building survey was undertaken on 8th August 2016. The timing of the building inspection to search for signs of bats posed no constraints as building inspections can be undertaken at any time of year. Indeed, the first night time bat survey took place on the same day so any fresh signs seen would be particularly relevant to the activity seen on the same day. An assessment of the building's potential to support bats could therefore be made according to evidence found, building condition, location and the experience of the surveyor.

2.4.2 Visibility of the exterior of the buildings was excellent and it was possible to gain a clear view of all aspects. All external walls and rooftops were observed clearly and full access was granted to the internal spaces of both buildings on site. **Overall, it was considered that there were no constraints that would significantly impede the carrying out of a rigorous buildings inspection survey.**

2.4.3 The night-time activity surveys on site were carried out between 8th August and 19th September 2016. This survey timing is during the optimal survey period and the weather conditions were considered ideal to observe and record any bat activity at the site (see Table 1).

Table 1: Weather conditions during the night time bat activity surveys.

Survey Date	Temperature at start of survey	Sunset/ Sunrise	Weather
8th August 2016	14 °C	21:00	Feeling cool, dry and with a moderate breeze. Clear skies. Fine conditions for observing bats.
17th August 2016	10 °C	05:48	Cool, dry and with light air. 100% cloud cover. Fine conditions for bat surveying.
19th September 2016	15 °C	19:13	Warm and dry and still air. 100% cloud cover. Good bat surveying conditions.

3.0 SURVEY RESULTS

3.1 External Building Inspection

3.1.1 Typical of traditional stone/slate barns, the buildings on site had numerous access points that bats could potentially use to possible roosts within. The rooftops had lifted slates under which bats could gain access (see Plate 2). There were multiple cracks and gaps between stones within the walls (see Plate 3). Gaps were present underneath eaves/soffits (see Plate 2) as well as within the roof verges (see Plate 4). Perhaps the most striking was the large open doorways and windows that provided clear easy and permanent access for bats (see Plates 2, 3 and 5).

3.1.2 On either side (west and east) of the barns there were two outer sheds. Both of these are likely to be affected by the development proposals. The western building was built from breeze blocks and metal cladding with an asbestos roof (see Plate 6). The eastern building was wooden and metal clad with an asbestos roof (see Plate 7). Both buildings were found to be devoid of any external features suitable for bat roosting. However, they both had clear entrances for potential access to the inside.

3.1.3 **In summary, the main stone barns had numerous features indicative of potentially offering suitability for roosting bats.** These included: crevices within roofing slates, in the verges, in the eaves and within the cracked/missing pointing on the walls; open windows and doorways offering free flight lines to the internal voids within both barns. **Neither of the outer sheds had any outer features for roosting bats, though there was free access to the inner spaces.**

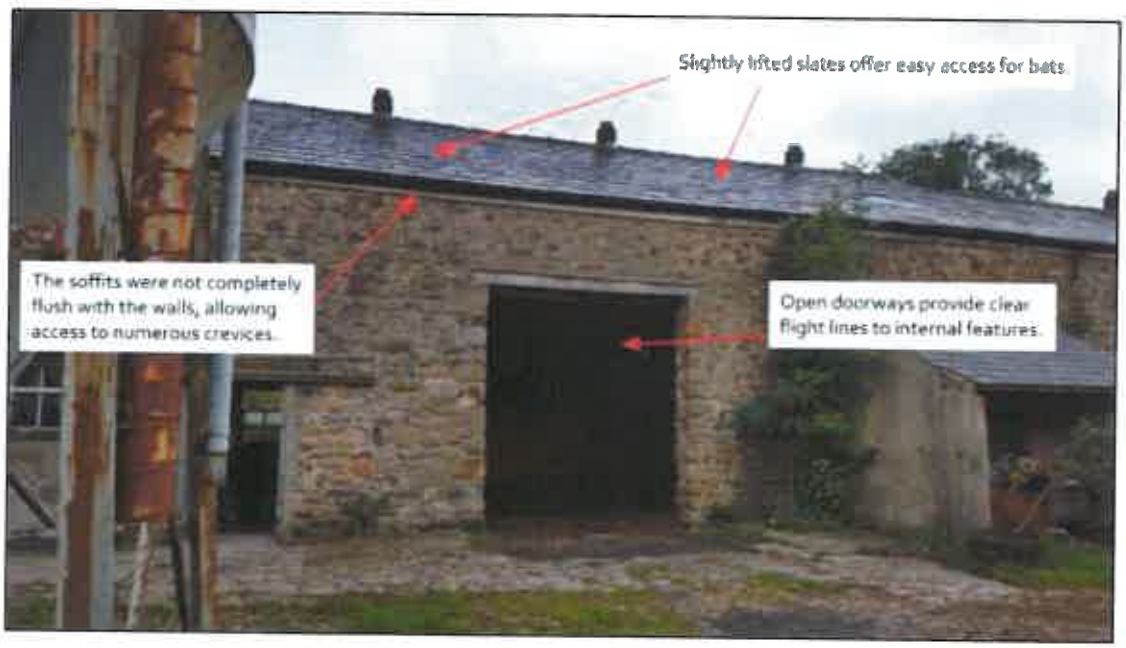


Plate 2: The southern aspect of the eastern barn. Some potential was found within the slates rooftops, under the soffits and within the open doorways.

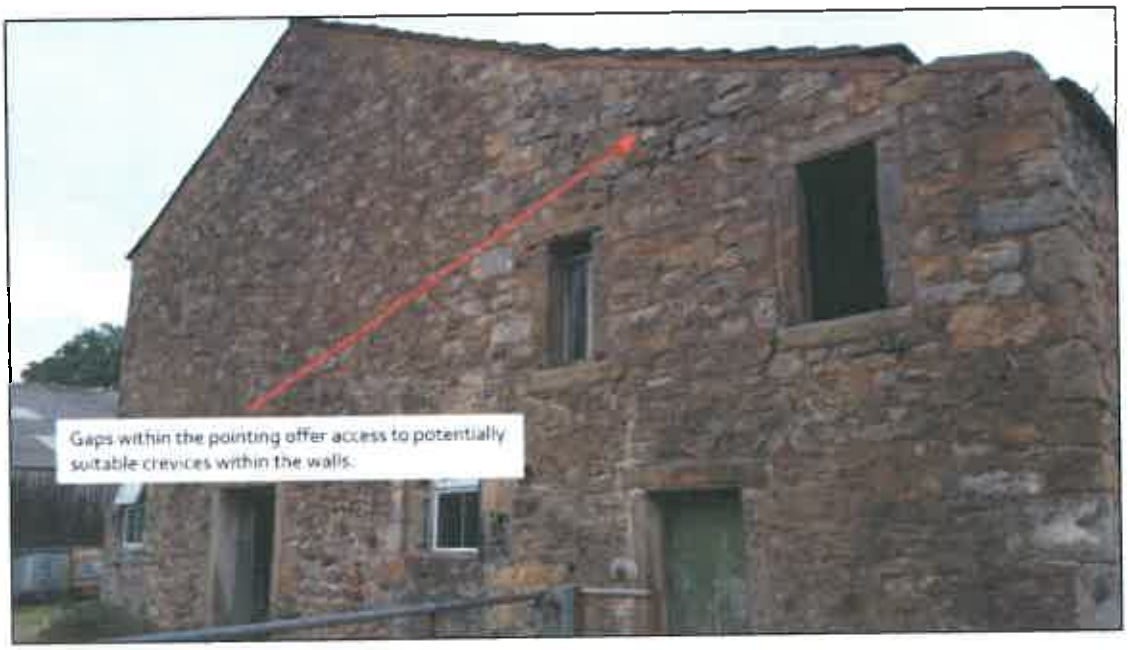


Plate 3: The southern aspect of the western barn. Abundant gaps in the walls could be found on this aspect and others. In addition, many of the entrance (i.e. windows and door) were completely open to the elements.

Plate 4: All along the roof verges there were numerous possibilities for bats to gain access to possible bat roosting locations.

Plate 5: The western barn also had a large open doorway allowing free access to the internal spaces.

Plate 6: The western shed had clear open access to the inside of the building.

Plate 7: The eastern shed had no features around the outside that were suitable for roosting bats, though access was available for bats to gain access.

3.2 Internal Building Inspection

3.2.1 The internal inspection revealed similar findings to those during the outside inspection. The old barns had numerous potential bat roosting locations within. Based on previous experience in a multitude of similar structures, bats can be found roosting atop such old stone walls (see Plate 8), within gaps in the pointing (see Plate 9), between the wooden frameworks of the roof (see Plate 10) and where the tie beams and purlins meet the walls (see Plate 11).

3.2.2 A full search of the barns was carried out for any signs of recent or historic bat activity. As is often the case in old barns, this was difficult due to the ground being relatively heterogenous with no smooth clear surfaces to check for droppings. However, despite this a collection of droppings was found in the eastern barn at the foot of the western wall (see Plate 12). In addition, individual droppings could be seen scattered throughout both barns. No other evidence such as scratch marks, staining and/or smells were observed throughout the survey.

3.2.3 A search was also carried out within the two outer sheds for any possible roost locations and/or signs of recent/historic bat activity. It was determined that no suitable roosting locations were present within these structures. In addition, a complete lack of any signs of activity confirmed that these buildings were not suitable for bats.

3.2.4 **In summary, the main barns were found to have a multitude of potential roosting locations present within. This was confirmed by the presence of bat droppings throughout both barns, with a small collection in the eastern barn. Neither of the two outer sheds were deemed suitable for roosting bats.**

Plate 8: Bats can often be found accessing roosts atop or within walls from above.

Plate 9: The stone walls had areas of missing pointing allowing access within.

Plate 10: Small crevices between purlins/rafters can be ideal for roosting bats.

Plate 11: Numerous gaps were present in the walls around the wooden roof frameworks.

Plate 12: Bat droppings were difficult to spot within the barns, though this collection potentially marks the area below a possible roost location.

3.3 Night Time Activity Survey

3.3.1 Throughout all surveys the surveyors were located around all aspects of the buildings and adjusted during the course of the surveys as required (see Plan 3), based on the movements of the bats. The first night time survey was a dusk survey carried out on the 8th August 2016. The first bat observed during this survey was a common pipistrelle that emerged from the main entrance of the western barn at 21:09. Following this a further 7 common pipistrelles and two soprano pipistrelles were observed collectively exiting the entrance of both the western and the eastern barns. The last of these emergences occurred at 21:30. Throughout this time bats were consistently flying in and around the doorways to the barn. After this period, no bats were seen exiting/entering/around the main doors of the barns. In addition to these emergences 2 common pipistrelle bats were seen emerging from the rear doorway of the western barn at 21:13 and 21:18. General activity patterns around the building other than the emergences comprised occasional common and soprano pipistrelle passes. No common activity trends were observed, other than brief commuting/foraging passes in various directions. The survey was terminated approximately 1 hour and 30 minutes after sunset.

3.3.2 On the 17th August 2016 the second night time survey was carried out in the form of a dawn re-entry survey. This began approximately 2 hours prior to sunrise. This survey had reduced amounts of activity in comparison to the first survey. The majority of activity comprised occasional brief common pipistrelle passes of the type that is indicative of commuting passes. At 04:45 a single common pipistrelle was entering the building underneath the soffit on the eastern barn above the main doorway. At 04:55 another common pipistrelle entered the main doorway of the western barn. Two other common pipistrelles were seen entering the barns; one into the southern roof verges of the western barn (05:10) and one into the slates on the south face of the eastern barn (05:20). Other activity observed comprised the occasional recordings of Myotis bats passing to the rear (north) of the barns, though they did not show any interest in the buildings. As a

side note, during the survey whilst there were fewer bats using the barns, more activity could be seen around the south face of the main residential dwelling to the south east of the barns. It is possible that the bats that use the barns for roosting were utilising the nearby dwelling too. The survey was terminated at sunrise.

3.3.3 The third and final survey was an emergence dusk survey carried out on 19th September 2016. This began approximately 15 mins before sunset until around 1 hour 30 minutes after sunset. Activity trends were heightened during this survey in comparison to the dawn survey with a total of 13 bats exiting the barns. The eastern barn had 3 common pipistrelles exiting from the main doorway of the eastern barn and 1 from the slates on the roof. From the western barn, there were 5 common pipistrelles and 3 soprano pipistrelles emerging from the main doorway. In addition, there was a single common pipistrelle out from around the drainpipe of the small outhouse between the barns. The first bat emerged at around 19:23 and the final emergence was around 19:44. After this time there was limited activity recorded around the site comprising pipistrelle and a single noctule pass overhead that was not seen. See Plan 3 and Plates 13 – 16 for a depiction of the key activity trends and emergence/entry points around the buildings.

3.3.4 The specific roost locations within the barns were located with the aid of night vision cameras. Indeed, the night vision camera confirmed that the bats from within the eastern barn were exiting from the crevices depicted in Plate 17, above the collection of droppings found (see Plate 12). Roost locations within the western barn were also atop the walls, as shown in Plate 8 above and the below Plate 18.

3.3.5 In summary, bat activity on the Little Dudlands site comprised relatively low numbers of common species utilising the barns for roosting purposes. **A maximum count of 10 roosting common pipistrelles and 3 roosting soprano pipistrelles were recorded on the final survey (19th September).** These bats utilised both sections of the barns, predominantly using the main entrances to gain access to inner roosting locations. In addition, crevices behind the soffits, under slates and at the gable end verges were also used for roosting. During the surveys activity trends comprised heightened activity in and out of the main entrances around the times of emergence/entry. Other than this the site had minimal levels of activity, particularly of other species. Despite the time of the year, and given the low numbers encountered and presence of the majority of bats being inside the cool barns, it is unlikely that the roosts within the barns represent a maternity colony. In addition, the small numbers scattered around the rest of the barns are too low to be likely to represent maternity colonies. **In light of these factors, a Natural England licence and appropriate mitigation/compensation measures are essential as a part of the project to secure the ongoing value of the site for legally protected species.**

Plan 3: Night time bat surveyor locations around the barns (blue); general flight lines (pink) and emergence/entry points (green).

Plate 13: Roost entrance location on the western barn, southern gable end.

Plate 14: Roost entrance location on the western barn, western aspect.

Plate 15: Roost entrance location on the western barn, eastern aspect. Also a single bat was seen entering emerging from the eaves of the drainpipe on the eastern barn.

Plate 16: Roost entrance locations on the eastern barn, southern aspect.

Plate 17: The western wall within the eastern sectioon of the barn. Bats were seen using roosts atop the walls and around the purlins.

Plate 18: Known roost locations within the western section of the barn.

3.4 Site Status and Protected Species Risk Assessment

3.4.1 During the building inspection survey the two main barns, as well as two associated outer sheds, were fully inspected inside and out for potential for roosting bats. Both barns were concluded to have a multitude of features that could potentially offer roosting potential. However, the outer sheds were determined to have no potential. As such, further night time surveys were carried out on the two barns. Bats were seen predominantly accessing the barns via the main entrances from/to the main courtyard. These bats used roost features within the barns located atop the walls and in crevices within the walls. In addition, bats were seen using roosts underneath slates, soffits and roof verges. A maximum count of 10 common pipistrelles and 3 soprano pipistrelles were recorded roosting within and on the barns.

3.4.2 It is understood that the barns will be converted and the associated sheds will be affected by the development or demolished. Given the lack of any bat roosts within the sheds, the loss of these structure is likely to have no impact on local bat populations. However, **any works on the barns without appropriate mitigation/compensation is likely to have a detrimental impact on small numbers of breeding common and soprano pipistrelle bats. In addition, it is likely that small numbers of breeding swallows would be affected by these works.**

4.0 CONCLUSIONS AND RECOMMENDATIONS

4.0.1 In the summer of 2016 Sunderland and Peacock Associates commissioned Simply Ecology Ltd to carry out updated bat surveys on the barns and agricultural sheds at Little

Dudlands Farm. The night time surveys revealed that up to **10 x common pipistrelles** and **3 x soprano pipistrelles** use the barns for roosting purposes located across a number of separate day roosts. No roosts were present within the sheds. The proposed conversion of the barns is therefore likely to impact on small numbers of common bat species due to future restriction to roosts. As such, section 5.0 comprises necessary mitigation and compensation measures to be carried out.

4.1 Bats

The Sheds

4.1.1 The surveys found that there were no signs of bats, nor any potential for bats to roost in the warehouse building.

- **It is recommended that all works to the two sheds on the west and the east of the main barns can go ahead without the need for any Natural England licence, mitigation/compensation or ecological clerk of works present.**

The Main Barns

4.1.2 **It is concluded that a Natural England licence will be necessary for works upon the stone barns as there will be a clear impact upon known day roosts of locally common bat species.** Appropriate working methods and mitigation to ensure local bats are not negatively impacted will be necessary, and these are detailed in section 5: Mitigation and Compensation (below). It is ESSENTIAL that the client understands the obligations placed upon them, to only carry out these works AFTER a Natural England Licence has been granted and WORKING JOINTLY WITH THE APPOINTED ECOLOGIST under the terms of the Licence. **Reason:** This will deliver compliance with: Section 9 (1 & 4) of The Wildlife & Countryside Act 1981 (as amended), Part 3 (41; 1 & 2) of The Conservation of Habitats and Species Regulations 2010 (as amended) and Section 11 (109 & 118) of the National Planning Policy Framework.

4.2 Breeding Birds

- *A key recommendation* is that the demolition and/or closing off of the existing buildings should be undertaken outside of the bird nesting season. If this is not possible, an Appointed Ecologist must be present to oversee all works around the nests. **Reason**: To ensure that no offences are committed under Section 1 (1b) The Wildlife and Countryside Act 1981 (as amended). The bird-nesting season is generally regarded to extend between March and August inclusive.

- To mitigate for loss of swallow nesting sites *a key recommendation* is that swallow nesting cups should be placed inside new or existing buildings on site. It is imperitaive that these are placed inside, or at the very least undercover in an area that is not exposed to the elements. These should be located at a height no less than 3m above the ground (see Plate 19). Swallow nests can be obtained from a number of sources including: http://www.gardengiftshop.co.uk/acatalog/Swallow-Nest-Box.html?utm_source=googlebase&utm_medium=feedmanager. **Reason**: This will ensure compliance with the Local Authority's duties under: Part 3 (40; 1) of The Natural Environment and Rural Communities Act 2006 and Section 11 (109 & 118) of the National Planning Policy Framework.

Plate 19: Illustrative examples of artificial swallow nesting boxes.

5.0 BAT MITIGATION AND COMPENSATION

5.0.1 Without the necessary mitigation and compensation, the proposed development at the site will result in the loss of multiple existing small bat roosts. Therefore, mitigation measures will be required to address these impacts. *It is advised that the implementation of the mitigation strategy detailed below should be sufficient to satisfy the LPA with regards to planning conditions 9 and 10 of the previously granted planning application.*

5.0.2 The mitigation strategy for this site has been designed to meet the test of there being no adverse effect on the favourable conservation status of the bat population affected by the proposed work. National Planning Policy and legislation requires that mitigation addresses the impacts picked up by the site assessment, as follows:

- Quantitative characteristics: There should be no net loss of roost sites, and in fact where significant impacts are predicted there will be an expectation that compensation will provide an enhanced resource compared with that to be lost. The reasoning behind this concept is that the acceptability of newly created roosts by bats is not predictable.
- Qualitative characteristics: the plans should aim to replace like with like. As an extreme example, it would be unacceptable to replace maternity roosts with hibernation sites.
- Functional characteristics: compensation should aim to ensure that the affected bat population can function as before. This may require attention to the environment around the roost.

5.0.3 As it is an offence to destroy or disturb a bat roost it is advised that this work must take place under the terms of a derogation licence issued by Natural England and the mitigation measures to provide alternative roosting sites to replace those destroyed and MUST be implemented to ensure legal compliance.

5.0.4 The mitigation measures recommended to the client are as follows:

5.1 In-situ retention of roosts

5.1.1 Given that the barns are to be converted, it is unlikely that there will be continued access through the main doors into the internal voids. However, if significant works does not take place on the roof, then it may be possible to retain the existing features of interest to bats, such as the slightly lifted slates and the crevices at the gable roof verges. If at all possible this should be implemented.

5.2 Impacts on existing roosts

5.2.1 The majority of the roosting bats were seen entering the building through the main doors to the internal roosts. These access points will be completely closed off as a result of the development. As such, access to roosts for the majority of the bats on site will be lost. This will effectively remove availability of roosts for the majority of the bats that currently use the site. However, it is anticipated that through careful mitigation the impacts of this can be reduced and in the long term, compensated for.

5.3 Planned timing of works – a strategy to mitigate potential impacts

5.3.1 In order to ensure that bats are not affected during the roosting period, it is advised that works should take place outside of the summer active season (May-August). In addition, works should take place outside of the winter period due to the building having potential for hibernating roosting bats (December-February). As such, we propose that exclusion takes place during the brief period of time post February and pre May, or in the period of September to November (inclusive). This will ensure that all bats are removed from the buildings prior to any works taking place. In the ideal world all works should take place over the course of the same time of year, allowing new roosting opportunities to be in place prior to the summer or winter period. However, due to the tight restrictions of completing works within two months this may not be possible. Given the low potential for winter hibernating bats, and the lack of any maternity colonies, it would be acceptable for works to take place throughout the subsequent season, providing temporary compensation measures are in place prior to any exclusion (which is necessary anyway) and that works are completed within a year of the exclusion measures being put into place. Below is a summary of the timings required with regards to this project:

Date	Work
Prior to any works	Bat derogation licence must be applied for and granted by Natural England. Local Authority permissions for the works to be in place
Prior to any works	Local Authority should be informed that Natural England Licence has been granted and all is in place to satisfy conditions 9 and 10 of the planning permission document.
March 2017	New temporary bat boxes should be placed around the site.
Between March and April 2017	Fit exclusion devices to the building for a minimum of 7 days in all known roost locations. Visits will be required daily (by an appropriately competent person (e.g. an site ecologist)) to open the exclusion devices and allow bats to emerge.

	This should be done in suitable weather conditions. Re-check roost sites for bats. Carry out careful demolition around the roost areas in the presence of an appropriately competent person. If bats are found then carefully re-locate to new bat roosts. If possible, all works should be carried out during this time period, with new roost provisions in place prior to May 2017. If this is not possible, then works should take place over the course of the year. Some day roosts will be lost over the bat season, however, the temporary measures will provide for the small numbers of bats until the building works have completed.
Prior to May 2018	All works on building should be completed with potential roost locations re-instated as per spec below.
Post May 2018	No further monitoring surveys or Natural England report will be required due to the small numbers of common bat species in this particular case.

5.4 Exclusion – a strategy to mitigate potential impacts

5.4.1 Prior to works being carried out on a given area of the building, bats should be excluded from the known roost locations. This should comprise the following elements:

- A tool-box talk will be delivered to the contractors by the ecologist for this project, so any queries can be fully answered prior to the commencement of work on areas where bats are and could be roosting.
- No capture of bats is likely to be necessary at this site. Good information on the presence of roosting bats and activity patterns was gathered during the night time surveys. We consider it possible to exclude bats from the work area, given that we know the existing features of interest for bats.
- The licensed ecology personnel will undertake a programme of excluding bats from the roosts to be affected. Exclusion will consist of using plastic sheeting to close off all main entrances. This will be opened daily around the times of emerging bats, and subsequently closed. Any small potential access points to roosts will be excluded using a small and light weight one-way plastic bag type exclusion

device, pinned over the roost entrance as detailed in the Bat Workers Manual Page 89 (see right).

- The exclusion apparatus will be left in situ for a minimum of 7 nights of suitable weather conditions (night temperatures above 6 degrees Celsius). Following this period a repeat emergence survey and endoscopic examination will confirm the absence of bats.
- Since bats will have been effectively excluded, any bats present will have been able to move to the newly installed bat boxes or to roosts off-site. Therefore, with this effective strategy in place, the deconstruction works **can take place without having a detrimental impact on local bat populations.**
- Once the bats have been excluded, any stripping of roof slates or dismantling of stones required around the known roost areas will commence immediately in the presence of a licensed bat surveyor. The licensed bat handler or suitably experienced person (Accredited Agent) will remain on site as this takes place and for the duration of the period that the roosting areas are exposed. In the unlikely event that bats are found during work, (which must then continue in order to weather proof the building), then bats will be removed by hand by the licensed bat handler or suitably experience person (Accredited Agent) and kept in a suitably secure dark box until they can be relocated by hand into the newly installed roosts.
- If bats are found elsewhere during the course of the remaining works, all work will stop and the ecological consultant for this project Jason Reynolds Tel: 07754 538437 will be informed prior to work re-commencing. Bats may be removed from high risk areas by hand, kept in a secure cardboard box with coverings in a quiet area of the site then released at night at the site in suitable weather conditions.
- Any injured/sick bats that need treatment for will be delivered to a well-known bat carer, Gail Armstrong, 1 Bottoms Lane, Silverdale, Carnforth, Lancashire. Gail has several bats in her care at any one time and regularly deals with sick and injured bats. Any bats found which are sick and or injured and it is judged that they need external care will be assessed on site and if necessary taken to Gail Armstrong for treatment. The risk of sick or injured bats being found at the site is however considered to be negligible.

5.5 New roost provision – a strategy for short and long term compensation

5.5.1 Given that a number of day roosts will be lost, it is essential that compensation should be provided to ensure no short or long term negative impacts occur. New semi-permanent and permanent roosts should be introduced to the site to ensure the site continues to have ongoing value for roosting bats. This will comprise the following:

- **Prior to any works commencing on site, the new semi-permanent roosts should be introduced on site.** This will ensure that alternative roosting is available at the site prior to roost disturbance and reduce any low impacts during the period of time that the works are taking place. This should be in the form of at least 6 bat boxes (e.g. see Plate 20) to be placed near to the building. The location of these can be anywhere on site provided they are fixed to permanent structures. They should be placed high (ideally 4m above ground if possible) and facing a variety of aspects. South and south west are ideal for summer roosting bats, though one or two should be placed facing north in order to offer roosting potential for male/hibernating bats.

Plate 20: The tree mounted bat roost to be installed prior to any redevelopment works.

- **The new permanent roosts must be in place prior at the time of development completion and prior to the building being inhabited. At the very latest this should be completed by the spring time season in 2018 in order to reduce potential impacts on bats during sensitive times of the year.**
- Wherever possible, the roosts should be returned to a state that closely resembles that prior to the development initiation. Pipistrelles are crevice dwelling bats and as such the new roosting provision should suit their needs. This can come in a variety of forms, such as: crevices underneath lifted slates or ridge tiles; gaps underneath soffits, fascias or barge boards; gaps that allow access to the tops or within walls; purpose installed designed bat boxes (such as Schwegler 2FR bat boxes). In this particular case, we suggest that the existing roof features be retained. Any slightly shifted or lifted slates should be left as is if at all possible. Any gaps in the verge should also be retained. We recommend that at least 6 ridge tiles be lifted to allow access to internal crevices (as per spec in Plate 21). In addition, we recommend that 15mm to 20mm gaps be left in the eaves that allow bats to gain access to the tops of the walls, and any potential internal cavities within the walls. These measures are summarised in Plates 22 – 23 and collectively should provide abundant suitable compensation measures for the loss of roosting space as a consequence of the development.

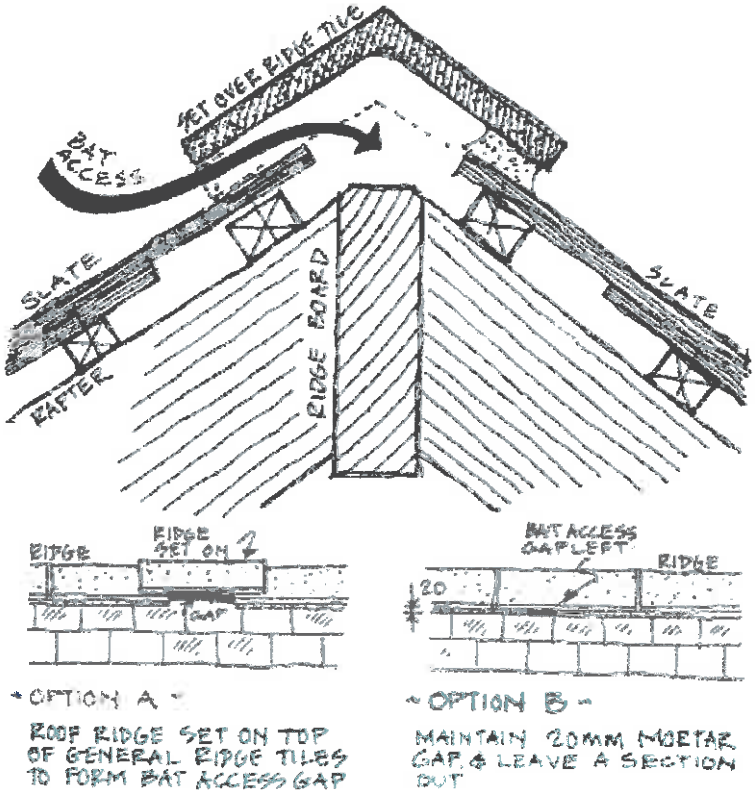


Plate 21: Gaps will be left to enable bat access under some of the ridge tiles. This can be achieved through one of two options (A or B). Access into the new roost spaces will be provided on one side only.

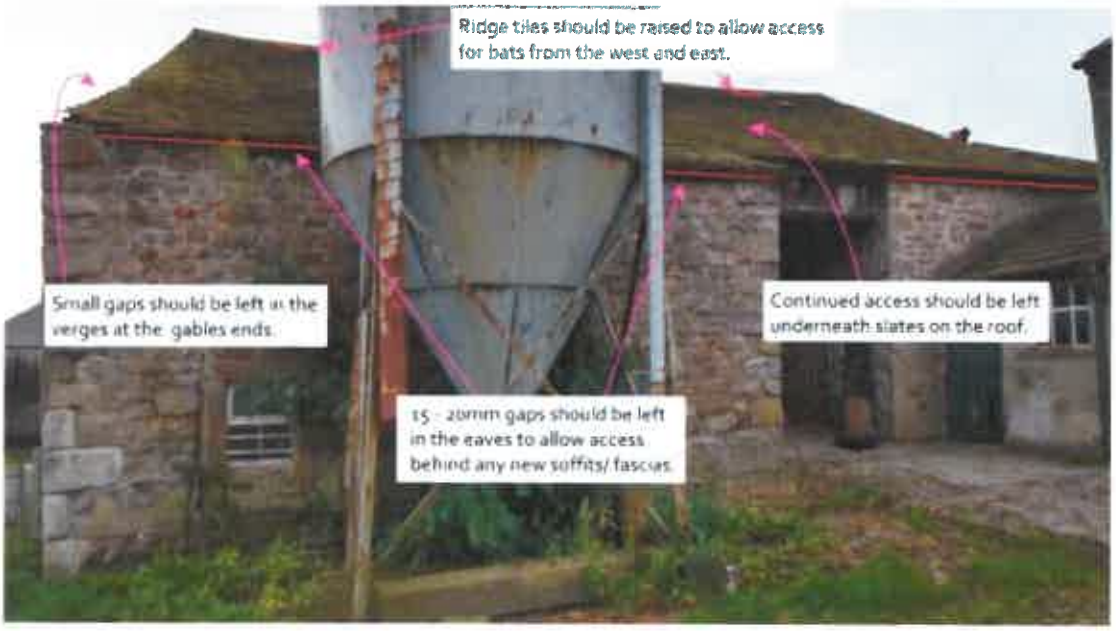
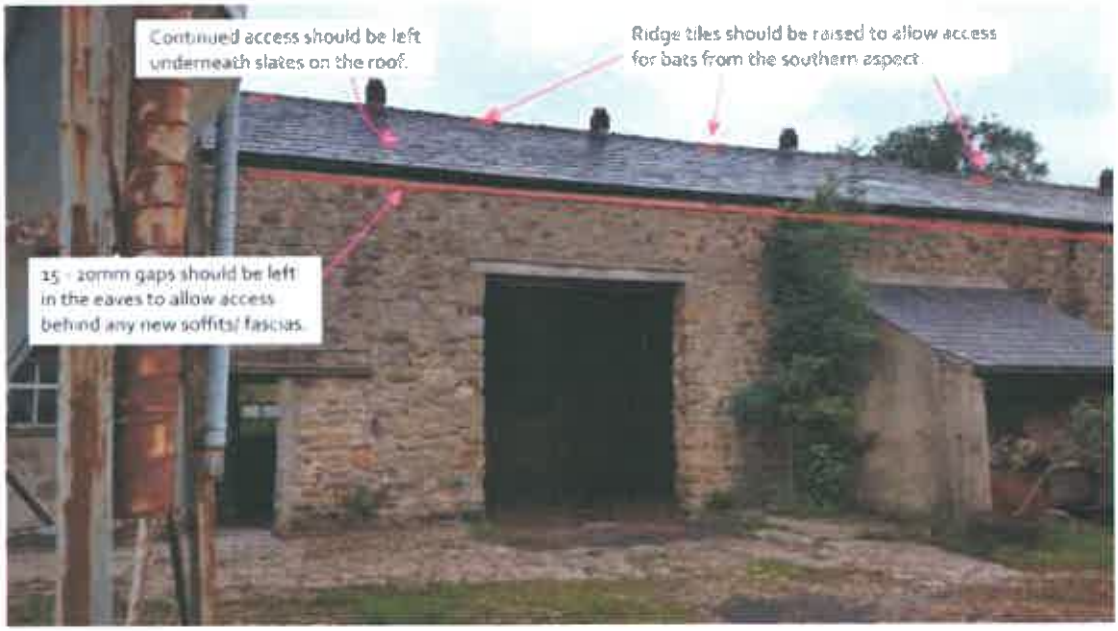


Plate 22: Compensation measures required for the western barn.



Plan 23: Compensation measure for the eastern barn.

5.6 A notice for contractors

5.6.1 In order to cover any residual risk that bats could be present, the following precautionary actions are advised:

- The contractors should be observant during the work for bats. Bats are opportunistic and may make use of gaps opened up during the work.
- In the event that any bats are found during the remainder of the works, the client (and any sub-contractor) is reminded of their protected legal status. All works must cease immediately until advice on how to proceed has been sought from the Appointed Ecologist.
- If it is absolutely necessary to remove a bat to avoid it being harmed, gloves should be worn. It should be carefully caught in a cardboard box and kept in the dark in a quiet place until it can be released at dusk near to where it was found, or moved to an undisturbed part of the building, with outside access, and placed in a location safe from predators. THIS MUST ONLY BE DONE FOR WELFARE CIRCUMSTANCES. The legal protection afforded to bats does not make this an admissible way to destroy a bat roost. The Appointed Ecologist will advise on steps necessary to ensure legal compliance and working under license if a bat roost is found.

5.7 Post development site maintenance and management

5.7.1 Any purposed roost locations provided post development shall not be altered or destroyed without the appropriate statutory mechanisms being followed. Maintenance will not be required as the purpose built compensation measures stated above are designed for the long term.

5.7.2 The site will remain in the management control of the current owners who will be responsible for site management.

5.8 Population monitoring

5.8.1 Due to the small number of bats and the limited impact predicted, in line with Natural England Guidelines, no monitoring is planned.

5.9 Mechanism for ensuring site safeguard of mitigation/compensation and post-development management and monitoring works

5.9.1 On the basis of survey information, specialist knowledge of the species concerned and understanding of the planning and legal system, we consider that there is no requirement for the use of a mechanism to ensure delivery of the recommendations of this report other than that which is already required by statute under a Natural England licence.

6.0 REFERENCES

Bat Conservation Trust (2016). *Bat Surveys – Good Practice Guidelines*. Bat Conservation Trust, London.

Department for Communities and Local Government (2012) *National Planning Policy Framework*. HMSO. London.

English Nature (2004) *Bat Mitigation Guidelines*. English Nature, Peterborough.

Ribble Ecology (2013) *Little Dudlands Farm, Rimmington Lane, Clitheroe, BB7 4EA*

Bat, Barn Owl & Breeding Bird Survey & Assessment. Unpublished survey report.

Russ, J (2012) *British Bat Calls A Guide to Species Identification*. Pelagic Publishing, Exeter.

Statutory legislation links:

The Conservation of Habitats and Species Regulations 2010:

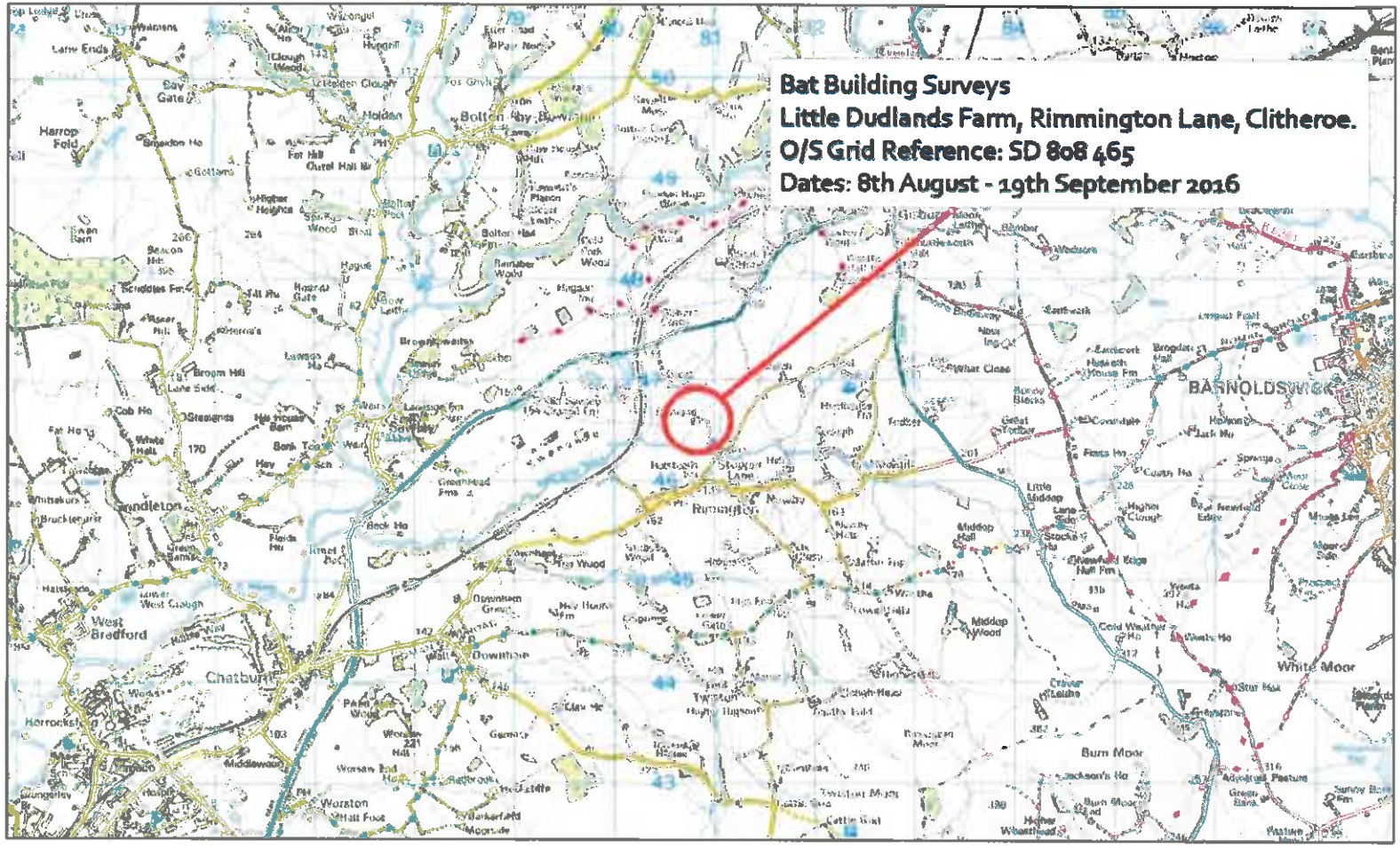
http://www.legislation.gov.uk/uksi/2010/490/contents/made

Wildlife and Countryside Act 1981:

http://www.legislation.gov.uk/ukpga/1981/69/contents

PLANS

Plan 1: The Site Location.



Plan 2: Existing Buildings.

ANNEX A: STATUTORY AND PLANNING CONTEXT

A.1 Bats

A.1.1 Bats and all places they use for shelter are afforded full protection by *The Wildlife and Countryside Act 1981* (as amended) (Section 9, Schedule 5). In addition to the above protection, bats are also protected under European legislation, which is implemented in England via The Conservation of Habitats and Species Regulations 2010.

A.1.2 If both national and international legislation are taken together, the legislative protection afforded to the species makes it an offence to:

- Intentionally/deliberately kill, disturb, injure or capture a bat.
- Intentionally or recklessly damage, destroy or obstruct access to any breeding site or resting place of a bat.
- Possess or control any live or dead specimen or anything derived from a bat.

A.1.3 If an activity is likely to result in any of the above offences, derogation from the legal protection can be issued in the form of a European Protected Species licence issued by Natural England. Licences for development purposes are issued under the Conservation of Habitats and Species Regulations 2010 and only allow what is permitted within the terms and conditions of the licence.

A.1.4 In addition to licensing, for activities requiring planning permission, the presence of bats is a material consideration, which must be fully considered when granting planning permission.

A.1.5 Where a development is proposed that may affect a protected species, alternative sites should be considered before granting planning permission. The planning authority may require mitigation or compensatory proposals in order for an activity to be granted planning permission.

A.2 Birds

A.2.1 The Wildlife & Countryside Act 1981 (as amended) protects all nesting wild birds in Britain. It is an offence to intentionally:

- Kill, injure, capture or take a wild bird;
- Take, damage or destroy the nest of any wild bird while that nest is in use or being built; or
- Take or destroy an egg of any wild bird.

A.2.2 There are specific penalties for committing the above offences to Schedule 1 birds. These are rarer or more vulnerable species which includes the barn owl. It is an offence to intentionally:

- Disturb a barn owl while it is building a nest or is in, on or near a nest containing eggs or young; or
- Disturb dependent young of such a bird.

A.3 Planning

A.3.1 When considering each planning application, the presence of protected species, such as those listed above, is a material consideration which must be fully considered by the Local Authority when granting planning permission. If a license

from Natural England is required, then prior to issuing any planning consent, the local planning authority will need to be satisfied that there is no reason why such a licence would not be issued. Therefore, in reaching the planning decision the local planning authority will need to have regard to the requirements of the Conservation of Habitats and Species Regulations 2010. The three licensing tests given in the Regulations must be considered. In summary, these are that:

1. The development is required for the purpose of:
   - preserving public health or public safety,
   - other imperative reasons of over-riding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment.
   - preventing serious damage to property.
2. There is no satisfactory alternative.
3. The proposal will not be detrimental to the maintenance of the population of the species at a favourable conservation status.

A.3.2 All necessary information would need to be provided to the planning authority as part of the planning application in order to address the above tests.

A.3.3 The Natural Environment and Rural Communities Act (NERC Act) 2006 extended the biodiversity duty set out in the Countryside and Rights of Way (CRoW) Act to public bodies and statutory undertakers to ensure due regard to the conservation of biodiversity. The Duty is set out in Section 40 of the Act, and states that:

"Every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity"

A.3.4 The Duty applies to all local authorities, community, parish and town councils, police, fire and health authorities and utility companies. Also, Local Authorities must follow the National Planning Policy Framework (NPPF) which provides guidance on the interpretation of the law in relation to wildlife issues and development.

A.3.5 For each development proposal considered by the Local Planning Authority the NPPF states that the authority must aim to conserve and enhance biodiversity. If significant harm resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused.